

ABSTRACT

A volume holographic digital data storage system includes a light source, a beam splitter, a spatial light modulator (SLM), a beam reducer including a beam transmission region and a beam absorption or reflection region, a first actuator, a first reflection mirror, a second reflection mirror, a first lens, a second actuator and a storage medium. By reducing the size of a reference beam through the use of the beam reducer and varying an incident location of the reference beam on the first lens by changing the positions of the beam reducer and the first or second reflection mirror, recording density of a holographic digital data storage system can be greatly increased.

15